

We claim the following:

1. A device for delivering a desired medium at certain temperature ranges for temperature management of a mammal, comprising:

an inlet source receives the desired medium and directs the desired medium to a temperature-control device;

a bio-feedback device measures the mammal's actual temperature, and transmits the measurement to the temperature-control device;

depending on the measurement, the temperature-control device alters the temperature of the desired medium; and

an outlet source directs the desired medium to manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a predetermined differential from the actual temperature; and

wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium to a pre-set differential from the actual temperature.

2. The device of claim 1 wherein the desired medium is water.

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3. The device of claim 1 wherein the desired medium is air.

4. The device of claim 1 wherein the
5 predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

5. The device of claim 1 wherein the
predetermined differential ranges from 5 to 15 degrees
10 Celsius below the actual temperature.

6. The device of claim 1 wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-
15 control device does not alter the temperature of the desired medium above a predetermined-maximum temperature.

7. The device of claim 1 wherein the pre-set
20 differential ranges from 5 to 15 degrees Celsius above the actual temperature.

7. The device of claim 6 wherein the
predetermined-maximum temperature is 0.1 to 10 degrees
25 Celsius above a predetermined-healthy temperature of the mammal.

8. The device of claim 6 wherein the
predetermined-maximum temperature is about 5 degrees
30 Celsius above a predetermined-healthy temperature of the mammal.

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~~19~~. The device of claim ¹⁹~~10~~ wherein the pre-selected differential is from 0.01 to 5 degrees Celsius above and below the predetermined-healthy temperature.

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~~20~~. The device of claim 1 wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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10 ~~21~~. The device of claim ¹⁹~~10~~ wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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15 ~~22~~. The device of claim 1 wherein the outlet source directs the desired medium into a blanket.

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20 ~~23~~. The device of claim ¹⁹~~10~~ wherein the outlet source directs the desired medium into a blanket.

¹²
25 ~~24~~. The device of claim ¹¹~~22~~ wherein the blanket has a plurality of channels.

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30 ~~25~~. The device of claim ³⁰~~23~~ wherein the blanket has a plurality of channels.

¹³
35 ~~26~~. The device of claim ¹¹~~22~~ wherein the blanket has a plurality of apertures directing the desired medium in the direction of the mammal.

³²
40 ~~27~~. The device of claim ³⁰~~23~~ wherein the blanket has a plurality of apertures directing the desired medium in the direction of the mammal.

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28. The device of claim 1 wherein the outlet
source directs the desired medium under a blanket.

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29. The device of claim 19 wherein the outlet
5 source directs the desired medium under a blanket.

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30. A method of using a device for delivering a
desired medium within a selected temperature range for
temperature management of a mammal, comprising following
10 steps:

directing the desired medium into an inlet source
and a temperature-control device;

measuring the mammal's actual temperature with a
bio-feedback device, and transmitting the measurement to
15 the temperature-control device;

depending on the measurement, altering the
temperature of the desired medium with the temperature-
control device;

directing the desired medium through an outlet
20 source to manage the temperature of the mammal;

wherein the mammal is to have its temperature
adjusted to a predetermined-desired temperature which is
entered into the temperature-control device;

wherein when the actual temperature is above the
25 predetermined-desired temperature, the temperature-
control device alters the temperature of the desired
medium to a predetermined differential from the actual
temperature; and

wherein when the actual temperature is below the
30 predetermined-desired temperature, the temperature-
control device alters the temperature of the desired
medium to a pre-set differential from the actual
temperature.

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31. The method of claim ³⁷~~30~~ wherein the desired medium is water.

³⁹
32. The method of claim ³⁷~~30~~ wherein the desired
5 medium is air.

⁴⁰
33. The method of claim ³⁷~~30~~ wherein the predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

10 ⁴¹
34. The method of claim ³⁷~~30~~ wherein the predetermined differential ranges from 5 to 15 degrees Celsius below the actual temperature.

15 ⁴²
35. The method of claim ³⁷~~30~~ wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-control device does not alter the temperature of the desired medium above a predetermined-maximum
20 temperature.

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36. The method of claim ³⁷~~30~~ wherein the pre-set differential ranges from 5 to 15 degrees Celsius above the actual temperature.

25 ⁴³
37. The method of claim ⁴²~~35~~ wherein the predetermined-maximum temperature is 0.1 to 10 degrees Celsius above a predetermined-healthy temperature of the mammal.

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38. The method of claim ⁴²~~35~~ wherein the predetermined-maximum temperature is about 5 degrees

39. The method of claim 30 wherein the pre-selected differential is from 0.01 to 5 degrees Celsius above and below the predetermined-healthy temperature.

~~48~~ 41. The method of claim ~~30~~³⁷ wherein the outlet source directs the desired medium into a blanket.

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~~43~~. The method of claim ⁴⁸~~41~~ wherein the blanket has a plurality of apertures directing the desired medium in the direction of the mammal.

25 ³⁴
 45. The device of claim ¹⁹~~10~~ wherein the outlet
 source directs the desired medium to a mattress.

30 ⁵²
 47. The method of claim ³⁷30 wherein the outlet
 source directs the desired medium to a mattress.

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48. The device of claim 19 wherein the outlet
source directs the desired medium to a mattress pad.

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49. The device of claim 1 wherein the outlet
5 source directs the desired medium to a mattress pad.

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50. The method of claim 37 wherein the outlet
source directs the desired medium to a mattress pad.

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10 51. The device of claim 1 wherein the temperature-
control device can alter the temperature of the desired
medium at a predetermined rate.

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15 52. The device of claim 19 wherein the
temperature-control device can alter the temperature of
the desired medium at a predetermined rate.

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20 53. The method of claim 37 wherein the
temperature-control device can alter the temperature of
the desired medium at a predetermined rate.

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25 54. A device for delivering a desired medium at
certain temperature ranges for temperature management of
a mammal, comprising:

an inlet source receives the desired medium and
directs the desired medium to a temperature-control
device;

a bio-feedback device measures the mammal's actual
temperature, and transmits the measurement to the
30 temperature-control device;

depending on the measurement, the temperature-
control device alters the temperature of the desired
medium; and

an outlet source directs the desired medium to manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered
5 into the temperature-control device;

wherein when the actual temperature is above the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium at a predetermined rate; and

10 wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the desired medium at a predetermined rate.

15 ⁵⁷₅₅. The device of claim ⁵⁶₅₄ wherein the desired medium is water.

⁵⁸₅₆. The device of claim ⁵⁶₅₄ wherein the desired medium is air.

20 ⁵⁹₅₇. The device of claim ⁵⁶₅₄ wherein the predetermined differential ranges from 0.1 to 35 degrees Celsius below the actual temperature.

25 ⁶⁰₅₈. The device of claim ⁵⁶₅₄ wherein the predetermined differential ranges from 5 to 15 degrees Celsius below the actual temperature.

30 ⁶¹₅₉. The device of claim ⁵⁶₅₄ wherein the pre-set differential ranges from 0.1 to 35 degrees Celsius above the actual temperature, so long as the temperature-control device does not alter the temperature of the

desired medium above a predetermined-maximum temperature.

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60. The device of claim ⁵⁶~~54~~ wherein the pre-set
5 differential ranges from 5 to 15 degrees Celsius above
the actual temperature.

⁶²
81. The device of claim ⁶¹~~59~~ wherein the
predetermined-maximum temperature is 0.1 to 10 degrees
10 Celsius above a predetermined-healthy temperature of the
mammal.

⁶³
62. The device of claim ⁶¹~~59~~ wherein the
predetermined-maximum temperature is about 5 degrees
15 Celsius above a predetermined-healthy temperature of the
mammal.

⁶⁵
63. The device of claim ⁵⁶~~54~~ wherein the
temperature-control device alters the temperature of the
20 desired medium to a pre-set differential from the actual
temperature.

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64. A device for delivering a desired medium at
certain temperature ranges for temperature management of
25 a mammal, comprising:

an inlet source receives the desired medium and
directs the desired medium to a temperature-control
device;

a bio-feedback device measures the mammal's actual
30 temperature, and transmits the measurement to the
temperature-control device;

depending on the measurement, the temperature-control device alters the temperature of the desired medium; and

an outlet source directs the desired medium to
5 manage the temperature of the mammal;

wherein the mammal is to have its temperature set to a predetermined-desired temperature which is entered into the temperature-control device;

wherein when the actual temperature is above the
10 predetermined-desired temperature, the temperature-control device alters the temperature of the mammal at a predetermined rate; and

wherein when the actual temperature is below the predetermined-desired temperature, the temperature-control device alters the temperature of the mammal at a
15 predetermined rate.

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65. The device of claim 64 wherein the desired
medium is water.

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66. The device of claim 64 wherein the desired medium is air.

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67. The device of claim 64 wherein the
25 predetermined rate ranges from 0.1 to 25 degrees Celsius per hour.

77 73
68. The device of claim 64 wherein the
30 predetermined rate ranges from 1 to 15 degrees Celsius per hour.

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69. The device of claim ⁷³~~64~~ wherein the temperature-control device is a heat transfer unit with a temperature-measurement instrument.

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⁷⁰. The device of claim ⁷³~~64~~ wherein the outlet source directs the desired medium into a blanket.

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10 ⁷¹. The device of claim ⁷⁸~~69~~ wherein the predetermined-maximum temperature is 0.1 to 10 degrees Celsius above a predetermined-healthy temperature of the mammal.

⁸⁰
15 ⁷². The device of claim ⁷⁸~~69~~ wherein the predetermined-maximum temperature is about 5 degrees Celsius above a predetermined-healthy temperature of the mammal.

⁸²
20 ⁷³. The device of claim ⁷³~~64~~ wherein the temperature-control device alters the temperature of the desired medium to a pre-set differential from the actual temperature.

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25 ⁷⁴. The device of claim 1 wherein the predetermined-desired temperature is selected from the group consisting of a temperature below the mammal's normal temperature, the mammal's normal temperature, and a temperature above the mammal's normal temperature.

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30 ⁷⁵. The device of claim ⁷³~~64~~ wherein the predetermined-desired temperature is selected from the group consisting of a temperature below the mammal's normal temperature, the mammal's normal temperature, and a temperature above the mammal's normal temperature.

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76. The method of claim 30 wherein the
predetermined-desired temperature is selected from the
group consisting of a temperature below the mammal's
normal temperature, the mammal's normal temperature, and
5 a temperature above the mammal's normal temperature.

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77. The device of claim 73 wherein the blanket has
a plurality of channels.

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10 78. The device of claim 73 wherein the blanket has
a plurality of apertures directing the desired medium in
the direction of the mammal.

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15 79. The device of claim 73 wherein the outlet
source directs the desired medium under a blanket.

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80. The device of claim 73 wherein the outlet
source directs the desired medium to a mattress.

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20 81. The device of claim 73 wherein the outlet
source directs the desired medium to a mattress pad.

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25 82. The device of claim 56 wherein the blanket has
a plurality of channels.

67
83. The device of claim 56 wherein the blanket has
a plurality of apertures directing the desired medium in
the direction of the mammal.

68
30 84. The device of claim 56 wherein the outlet
source directs the desired medium under a blanket.

⁶⁹
~~85~~. The device of claim ⁵⁶~~54~~ wherein the outlet
source directs the desired medium to a mattress.

⁷⁰
~~86~~. The device of claim ⁵⁶~~54~~ wherein the outlet
5 source directs the desired medium to a mattress pad.

⁷¹
~~87~~. The device of claim ⁵⁶~~54~~ wherein the
temperature-control device is a heat transfer unit with
a temperature-measurement instrument.

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~~88~~. The device of claim ⁵⁶~~54~~ wherein the outlet
source directs the desired medium into a blanket.

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